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Dear Mayor and Council,

On August 12, 2014, Scottsdale parent and businessman, Adam Wasserman, sent an email to Mayor Lane and Councilmembers Klapp, Korte, (Bob) Littlefield, Milhaven, Phillips and Robbins about “safety, traffic and environment issues” at his daughter’s elementary school.

Mr. Wasserman described the 45-minute long line of idling vehicles and the attendant pedestrian safety and environmental issues – “perhaps most importantly ... a toxic dust cloud right over the school where about 1000 five to twelve year old children are.” Mr. Wasserman opined that “... this is certainly counter to a family, kid-friendly community, which I assume is something Scottsdale is and aspires to be.” He appealed for “local leadership” to address “this traffic management/school health situation.”

The Mayor’s office forwarded Mr. Wasserman’s email to the Environmental Quality Advisory Board (EQAB). This issue was already on EQAB’s radar and research was underway.

EQAB invited Mr. Wasserman and Julie Finke from Arizona Department of Environmental Quality (ADEQ) / Office of Children’s Environmental Health to our October 15, 2014 meeting. Ms. Finke briefed EQAB on the programs and resources available through her office. Rachel Smetana, Acting Chief of Staff, Office of the Mayor, also attended the meeting and expressed the Mayor’s support for EQAB’s work on this issue.

On December 17, 2014, EQAB proposed that the Mayor facilitate the formation of a steering committee to include representatives from the three largest school districts within Scottsdale.

On April 21, 2015, the Mayor facilitated a meeting attended by representatives of the City, Scottsdale Unified School District, ADEQ Office of Children’s Environmental Health and EQAB.

At this meeting, EQAB committed to two deliverables:

1. A prepared template for the City and schools to use in response to citizen and parent complaints. The goal of the communication would be to invite the complainant to get involved and become part of the solution.
2. Compile best practices and case studies to be utilized by all stakeholders, including parent teacher organizations.

The attached School Transportation Resource Packet is the result.

It is EQAB’s intent and goal that this resource packet be disseminated to school districts, parent teacher organizations and other interested parties. In addition, EQAB is considering how the board might continue to play a role in facilitating solutions to school transportation problems.

Dr. Alisa McMahon, Chair

August , 2016

School Transportation Resource Packet

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Introduction

Scottsdale grows and succeeds by offering residents a safe, clean and modern lifestyle. Long, disorganized, toxic lines of idling cars congregating around our schools and through our neighborhoods contradicts this modern cityscape. The City of Scottsdale Environmental Quality Advisory Board supports stakeholders in their ambitions to find safer, healthier and more efficient school transportation options. This Resource Packet offers a snapshot of the issues, stakeholders and potential solutions.

Scope of the Problem

Scottsdale is home to approximately 30,000 school age residents. Approximately 24,000 are under the age of 16. By 2020, these numbers will grow to approximately 32,000 and 25,000, respectively.

Four school districts serve about 27,000 Scottsdale student residents (Table 1, Figure X). In addition, an unknown number of Scottsdale student residents attend private and charter schools, both within and outside the city.¹ Furthermore, students who reside elsewhere travel to public, private and charter schools within Scottsdale. Thus, a significant number of people are on the move during narrow periods of time, converging on and departing from focused destinations.

School District	Students Enrolled		
	Total	Scottsdale Residents	Scottsdale Percent
Scottsdale Unified (SUSD)	24,330	17,476	72%
Paradise Valley Unified (PVUSD)	32,000	7,680	24%
Cave Creek Unified (CCUSD)	5,352	1,445	27%
Balsz School District	2,529	2	0.08%
Total	64,211	26,603	

Table 1. Student enrollment in four districts serving Scottsdale

How do Scottsdale students get to and from school?

Generally speaking, a school district will provide transportation for students who attend their home school and live beyond a walking distance defined by district policy and grade level (Figure 1, Table 2). On the other hand, students who participate in open enrollment, i.e., do not attend their home school, are responsible for their own transportation.

The three main Scottsdale school districts transport 22 percent of enrolled students, a total of 13,642 students per day (Table 5).

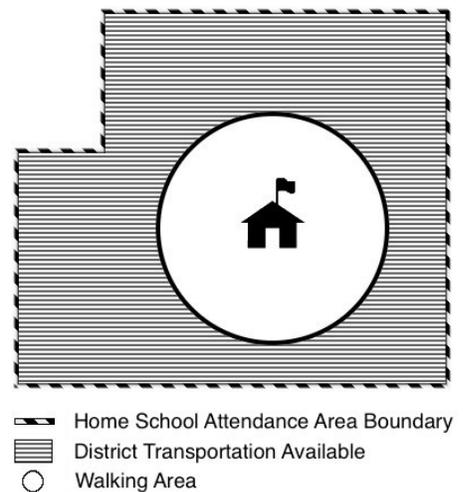


Figure 1

¹ Approximately 4,000 students attend charter schools located within or adjacent to Scottsdale.

Walking Distance in Miles				
School District	kindergarten	elementary	middle school	high school
SUSD	1.0	1.0	1.5	1.5
PVUSD	0.5	1.0	1.5	1.5
CCUSD	1.0	1.0	1.0	1.5

Table 2

Students Who Live Within Walking Distance of School They Attend		
District	Number	Percent
SUSD	8,620	36%
PVUSD	not available	not available
CCUSD	214	4%

Table 3

In Scottsdale’s largest school district, SUSD, only 36 percent of students enrolled live within the walking distance of the school they attend. In CCUSD, a considerably more rural district, the figure is just 4 percent (Table 3).

Students may apply for open enrollment in a school within or outside their district. Applications are accepted under the condition that students provide their own transportation. A weighted average of 37 percent of students enrolled in Scottsdale’s three main school districts participate in open enrollment (i.e., do not attend their home school) (Table 4). These students are not eligible for bus transportation and likely live too far from the school they attend to walk or use other means of “active transportation.”

Students Open Enrolled (district-wide)		
District	Number	Percent
SUSD	9,341	39%
PVUSD	11,520	36%
CCUSD	1,323	25%
Total	22,184	

Table 4

Students Transported (district-wide)		
District	Number	Percent
SUSD	4,911	20%
PVUSD	7,500	23%
CCUSD	1,231	23%
Total	13,642	

Table 5

Car-centric student transportation

Putting this all together, 51 percent of SUSD and CCUSD students potentially travel to school via a non-automobile form of transportation such as school bus and walking or other active transport (Table 6). The remaining 49 percent potentially travel to school via automobile (Table 6). However, anecdotal evidence suggests that a significant number of students who live within walking distance are driven or drive to school. It is not a stretch to say that the automobile is the regular mode of school transportation for over 50% of local district public school students, about 13,000 of whom live in Scottsdale.

Add to that number . . . For the most part, charter and private schools do not provide student transportation.²

² As a convenience to parents and students, charter school Noah Webster Pima offers free bus transportation to students who live farther than one mile from campus. Three buses run two routes each: three routes in Scottsdale and three within the Salt River Pima-Maricopa Indian Community. Hub stops are utilized as much as possible. Two of the three buses are propane fueled.



The Issues – pollution, health, safety and inefficiency

Open enrollment and parent-dominated transportation create many challenges. Commute distances vary widely; many students travel past their home school for an additional 10 to 40 minute drive to their chosen school grounds. Once they arrive, en masse, there is a queue to navigate. The afternoon pick-up process is even more congested than the morning drop-off. Many of our schools were designed in the days when more children walked and biked to school; they are ill-equipped to handle today's traffic load. Serious side-effects of car-centric school transportation include:

- Magnified traffic throughout our city
- Vehicle exhaust from lines of idling cars
- Injurious health impacts, particularly on our children
- Traffic and pedestrian safety perils on and near our campuses
- Diminished economic productivity for school staff and parents/caregivers

Transportation Choices Affect Our Children's Health

A single vehicle dropping off and picking up students puts three pounds of pollution into the air each month. Idling with the air conditioner running increases emissions by about 13 percent. Exposure to traffic-related air pollution has been linked to a variety of short- and long-term health effects in children, including asthma, reduced lung function, and impaired lung development. Vehicle exhaust exacerbates children's asthma symptoms. Asthma afflicts one in five Arizona school children. Asthma is the third leading cause of hospitalization among children under the age of 15.

Nearly one in three children are either obese or overweight. Lack of physical activity is one of the major contributors. Just one-third of children in the United States get the U.S. Department of Health and Human Services' recommended level of 60 minutes of moderate-to-vigorous physical activity per day. Children who walk or bicycle to school arrive at school more alert and ready to learn, are significantly more physically active throughout the day, and have better cardiovascular fitness than children who are driven to school.

The Solutions

Can stakeholders craft cleaner, healthier, safer and more efficient school transportation processes? Numerous local, regional and national agencies have expertise in the transportation, environmental, safety and organizational issues . . .

The City of Scottsdale Environmental Quality Advisory Board . . .

Template Response Letter to Concerned Parents and Citizens

This letter can be used by the City of Scottsdale, school districts, schools and others to respond to inquiries from parents and citizens who are concerned about drop-off and pick-up processes.

Dear Concerned Parent / Citizen,

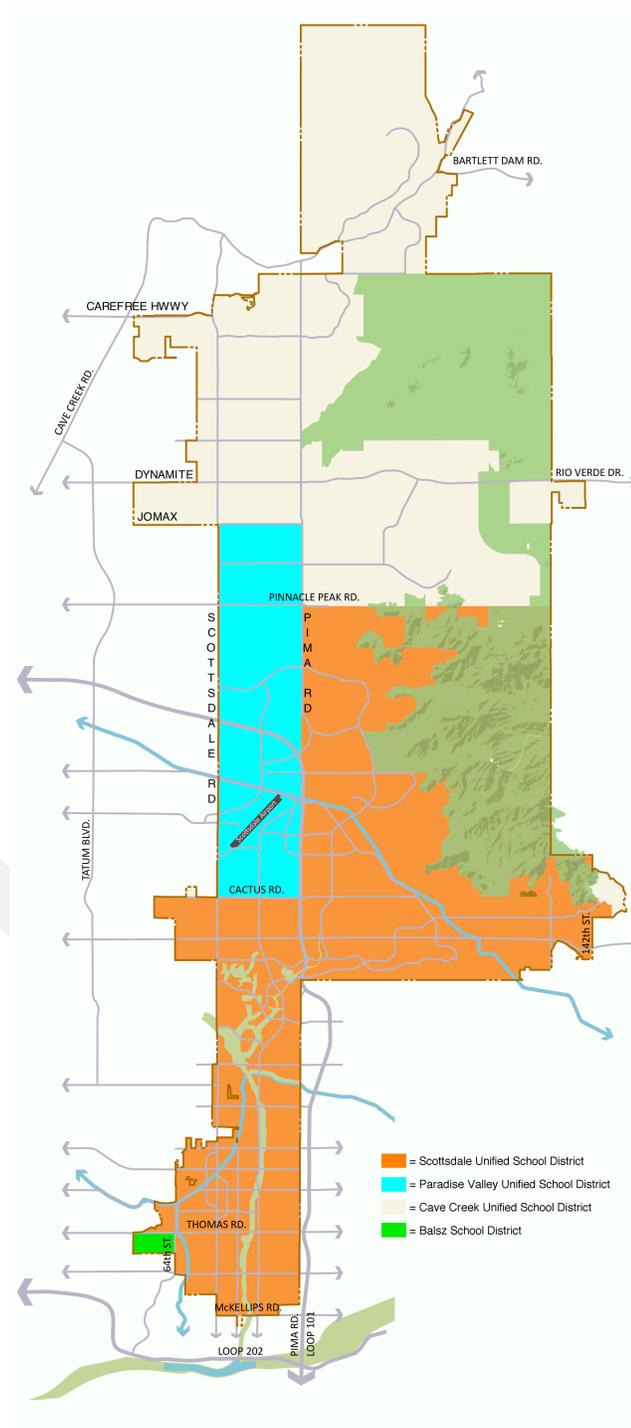
Thank you for making the health, safety and efficiency of our school community a priority. You are not alone in your hope to see school communities address transportation needs in a healthier, safer and more environmentally conscious way. We share that goal and encourage you to put your passion to work by supporting initiatives that improve school drop-off and pick-up processes!

Open enrollment and parent-dominated transportation create many challenges. Fortunately, there are many solutions. When you raise the subject to your PTO, Principal and District, you will attract like-minded change makers and solutions will start to flow. Here are some ways to get started within your school community:

- **Host a Ride Share Party** at your school – a positive way to get others involved and find a solution to the frustration of long pick-up lines. Leap into action!
- Ask your PTO to support a **Transportation Event** and to **appoint a Parent Liaison** who will collaborate with your school and district throughout the school year.
- Request free **no idling signage** for your campus drop-off and pick-up lines! Signage is available from the Office of Children’s Environmental Health at the Arizona Department of Environmental Quality (ADEQ). Schools within Scottsdale may also obtain signs from the City of Scottsdale’s Office of Environmental Initiatives.
- Launch a **School Science Club** with “transportation solutions” as its first project. When students and teachers are inspired and empowered, they will solve their school’s unique logistical, traffic and idling problems.
- Suggest **classroom science lessons** that support STEM curriculum. Teachers and students are the most optimistic and effective path to change school culture from within. Share these resources with your PTO and school staff:
www.airnow.gov/index.cfm?action=learning.forteachers
www.epa.gov/region8/idle-free-schools
www2.epa.gov/students/lesson-plans-teacher-guides-and-online-resources-educators
www.cleanairmakemore.com/the-classroom/lesson-plans/
- Encourage your school to participate in the free **Air Quality Flag Program**. ADEQ’s Office of Children’s Environmental Health provides flags, educational and outreach materials, program training and the daily forecast – all at no cost.
www.azdeq.gov/ceh/flag.html www.airnow.gov/index.cfm?action=flag_program.index
- Many more ideas and resources can be found in the “**School Transportation Resource Packet**” compiled by the City of Scottsdale Environmental Quality Advisory Board. **add: how to obtain**

Last, but certainly not least, your family can adopt a number of strategies *today* that reduce air pollution and traffic congestion: biking and walking to school, riding the closest designated school

bus, and carpooling. You might already see another family commuting from your neighborhood alongside you. Reach out and ask if you can carpool even just a few days of the week!



Partner Agencies and Groups

Numerous agencies and organizations have expertise in the transportation, environmental, safety and organizational issues facing schools and parents. Stakeholders might capitalize on existing programs. National, regional and local resources include:

- Safe Routes to School National Partnership (<http://saferoutespartnership.org/>)
- National Center for Safe Routes To School (www.saferoutesinfo.org/)
Safe Routes To School Online Guide (<http://guide.saferoutesinfo.org/>)
- Active & Safe Routes to School (www.saferoutestoschool.ca/resources)
- Arizona Department of Environmental Quality, Children's Environmental Health Program, Tools for Schools (www.azdeq.gov/ceh/tools.html)
 - Idle Reduction Toolkit (www.azdeq.gov/ceh/toolkit.html)
 - Air Quality Flag Program (www.azdeq.gov/ceh/flag.html)
 - School Bus Idle Reduction Program (www.azdeq.gov/ceh/bus.html)
- Environmental Protection Agency (EPA)
 - AirNow – Teacher's Air Quality Resources (www.airnow.gov/index.cfm?action=learning.forteachers)
 - Region 8 Idle Free Schools Toolkit (www.epa.gov/region8/idle-free-schools)
- Maricopa County Air Quality Department
 - The Clean Air Classroom (www.cleanairmakemore.com/the-classroom/)
 - Trip Reduction Program (www.maricopa.gov/aq/divisions/trip_reduction/)
- Valley Metro Be Bright – bicycle and pedestrian safety education program (<http://bebright.valleymetro.org/programs> and <http://bebright.valleymetro.org/resources>)
- Valley Metro Clean Air Campaign Awards
- Valley of the Sun Clean Cities Coalition (www.cleanairaz.org/)
- U.S. Department of Education Green Ribbon Schools (www2.ed.gov/programs/green-ribbon-schools/index.html)
- City & Town Engineers
- Scottsdale Police Department
- Arizona Department of Education
- School Principals
- Parent Teacher Organizations and District Parent Councils
- Arizona Charter Schools Association
- Scottsdale Unified School District
- Paradise Valley Unified School District
- Cave Creek Unified School District
- Balsz School District

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Paths to Improvements

The following ideas aim to catalyze solutions to the pollution, safety and inefficiency problems surrounding school transportation:

School Buses

Increasing school bus ridership and centralizing bus stops to serve neighborhoods rather than single riders can maximize the positive impact of the school bus fleet. The Clark County School District in Southern Nevada revamped its 300 route magnet school transportation system for the 2015-2016 school year. Bus stops for secondary students are now located at 25 centralized locations throughout the district, including high schools and middle schools. Stalls are paint coded to help students get on the right bus. Parents have the option to select a stop that is more convenient than the geographically closest stop. Benefits of centralized stops include: student ride times were reduced from 90+ minutes to under 60 minutes, students no longer had to arrive at bus stops in the dark, implementation was revenue neutral, the district realizes a small operational savings, and staffed bus stops provide safety and security.

Closer to home, SUSD utilizes regional bus stops for Hopi Elementary and its two choice schools. Drop-off/pick-up space is limited at Hopi Elementary. To alleviate traffic congestion at the school, buses serving Hopi stop at Arcadia High School and a few other locations within Hopi's walking area. Cheyenne Traditional and Arcadia Neighborhood Learning Center (ANLC) are K-8 "choice" schools, meaning their service boundary encompasses the entire district. By policy, transportation is the responsibility of the parent/guardian. However, to reduce traffic congestion at the schools, SUSD offers some bus transportation from nearby "regional" bus stops. The parent/guardian is responsible for transporting students between the regional bus stops and home. For Cheyenne, most of the regional bus stops are located in city parks such as Horizon Park. For ANLC, the regional bus stops are existing bus stops within the Arcadia service area.

- ✦ Reduces air pollution. Reduces traffic congestion. Improves traffic/pedestrian safety.
- ✦ Might require a change in the payment structure between school districts and Arizona Department of Education. Might require parental involvement for younger students.

Active: Walking / Walking School Bus / Bicycling / Bicycle Train

Active (non-motorized) transportation is an outstanding option for those who live within walking distance; bicycling extends the distance further. A Walking School Bus or Bicycle Train consists of a group of children walking or cycling to school with one or more adults, often one on each end. Children get "on" and "off" at organized "stops" along the "route." Routes can easily be altered and ideally pass right by "rider's" homes. Active transportation campaigns have been known to change their community's transportation ethos. (See Case Studies)

- ✦ Eliminates air pollution. Eliminates traffic congestion. Improves traffic/pedestrian safety. Increases children's physical activity level, health, confidence and independence. Provides opportunity to socialize with peers, interact with the environment and learn about road safety.
- ✦ Requires parental involvement for younger students and safe routes for all students. Weather can be a perceived impediment in the hottest months.

Park and Stride / Ride and Stride

This is a hybrid alternative for students who live beyond walking or biking distance. Parents of younger students park off-site and walk their children to the school grounds, either individually or in a Walking School Bus. Parking agreements can be reached with nearby churches, shopping centers, community centers or undeveloped parcels. Likewise, older students can be dropped off some distance from the school and walk the rest of the way. (See Case Studies)

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- ✦ Reduces air pollution. Reduces traffic congestion. Improves traffic/pedestrian safety. Increases children's physical activity level and health. Provides opportunity to socialize with peers, interact with the environment and learn about road safety.

- ✦ Requires parental involvement for younger students, parking area and safe walking route. Weather can be a perceived impediment in the hottest months. Does not keep cars off the road.

Mass Transit

The Scottsdale trolley routes near high schools and middle schools have high ridership. Scottsdale's Transportation Department frequently receives requests for buses and trolleys to serve schools. The proposed Cactus Trolley would directly serve five public schools, including one high school, two middle schools and two elementary schools. In addition, the route may be extended north to serve Notre Dame Preparatory High School and Scottsdale Preparatory Academy.

According to Paul Basha, City of Scottsdale Transportation Director, junior high and high school students and school employees throughout the nation are using mass transit in increasing numbers. Valley light rail stations near high schools have large ridership.

- ✦ Reduces air pollution. Reduces traffic congestion. Improves traffic/pedestrian safety. Increases children's confidence and independence.

- ✦ Requires parental involvement for younger students.

Pool to School / Ride Sharing

Many schools already promote carpool arrangements. These programs are most successful when the drive is far and participants share the same after-school activities.

- ✦ Reduces air pollution. Reduces traffic congestion. Improves traffic/pedestrian safety.

- ✦ Requires parental involvement.

Private Transport Services

A small percentage of private and charter school parents employ private transportation services. RubyRide (www.rubyride.co) is a locally-owned car service. For one family, the car subscription is lower in cost than the 3 day/week carpool it replaced; in addition, the parents save six hours of driving time a week. A School Ride (www.aschoolride.com), launched in 2009 by a parent team, serves BASIS charter schools, Brophy and Xavier. Lastly, SuperShuttle (www.Supershuttle.com) and locally-owned The Driver Provider (www.driverprovider.com) offer point-to-point van service throughout the Valley (not just the airport).

- ✦ Reduces air pollution. Reduces traffic congestion. Improves traffic/pedestrian safety.

- ✦ Cost borne by parents, often only justified by those with long commutes.

Staggered Schedules

Scottsdale Prep staggers start and end times to reduce congestion; grade levels are bundled (5-8 / 9-12). Sonoran Sky Elementary PTO organizes a seasonal roster of fee-supported extracurricular classes taught by teachers and staff before and after school, removing some of the population from peak drop-off and pick-up periods. Just a 15 minute adjustment can be effective.

- ✦ Reduces air pollution. Reduces traffic congestion. Improves traffic/pedestrian safety.

- ✦ Does not keep cars off the road or away from school; no improvement to pollution, traffic and productivity issues on the way to pick-up and drop-off. May increase administrative overhead. Cost of extracurricular classes borne by parents.

Dismissal Management Software

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Several GPS software products have been developed to streamline the dismissal process (e.g., www.school-pass.com). The software identifies buses and private vehicles upon arrival at the school grounds and notifies staff to release students to their waiting vehicles.

- ✎ Reduces air pollution. Reduces traffic congestion. Improves traffic/pedestrian safety.
- ✎ Does not keep cars off the road or away from school; no improvement to pollution, traffic and productivity issues on the way to pick-up and drop-off. Software cost.

Case Study 1

Way to Go!

Greater Vancouver, British Columbia, Canada

www.toolsofchange.com/en/case-studies/detail/135

A tiny pilot project in the Greater Vancouver Regional District (GVRD) got families out of their cars and onto the street. It has grown into a burgeoning, province-wide, active transportation program. Between December 1998, and spring 2001, 350 schools in British Columbia embraced the Way To Go! school trip reduction project.

Every ten years GVRD conducts a trip diary survey to determine the transportation habits of its residents. In 1994, GVRD was astonished to find that half of all school students were traveling to school by car. This was a 50 percent increase over the 1984 survey, which had found one in three students travelling by car. Put another way, one in five cars on the road during peak hours was transporting a child to or from school, despite the fact that many students lived only a few blocks from school. GVRD was concerned about the dangers this trend posed for air quality and traffic safety and about the long-term effects it could have on children's physical fitness and attitudes about car use: modern families were raising a whole generation that would be dependent on cars, even for very short trips. In the fall of 1997, GVRD commissioned a school trip reduction project to address these concerns. This project eventually became the Way To Go! school program.

Assembling the Team, Experts, Finances and Administrative Structure

To begin, the research team gathered information about existing school trip reduction programs in Canada and other countries. It identified relevant stakeholders in GVRD municipalities, such as engineering departments and traffic safety officers. These stakeholders assisted with traffic-safety-education research and recruitment of pilot schools. The team then selected six pilot schools from among 30 applicants. These schools represented a wide geographical area and diverse socio-economic backgrounds. Because Way To Go! addressed traffic safety concerns, the pilot was funded by the Insurance Corporation of British Columbia (ICBC).

The news media ran several stories on the pilot and Way To Go! was inundated with requests for process manuals and resource kits. ([Mass Media](#)) "The pilot project ended, our funding ended and my phone kept ringing," said Way To Go! Provincial Coordinator Bernadette Kowey. In December, 1998, Way To Go! staff secured funding to expand the program. The RoadSense Team, a partnership between autoplan brokers and the ICBC, recognized that the program fit well with their commitment to provide communities with the tools to initiate and maintain traffic safety programs and practices. The RoadSense Team funded the necessary staff and program resources to make Way To Go! available to all elementary and middle schools in British Columbia. It spent \$180,000 a year on Way To Go! staff, travel costs, resource development and production, distribution of information and resources and all communication and administration costs. Regional RoadSense teams provided some schools with grants for special projects and supplies. Grants paid for traffic safety amenities such as reflective vests and orange cones and for communication costs such as photocopying and laminating maps. RoadSense teams also provided in-kind contributions such as printing, laminating and photocopying.

The Product

Way To Go! developed into an approach that eventually included a detailed process manual and resource kit for schools. This kit was fundamental to the project's success: a comprehensive information package meant schools had less research to do as they launched their school trip reduction programs. ([School Programs That Involve the Family](#))

The process manual showed each school group how it could:

- collect data through surveys and mapping exercises
- determine the best routes to school
- integrate safe pedestrian and cycling education in schools
- establish a safer school site
- implement alternative travel strategies

The resource kit included:

- background facts and reasons for a traffic-reduction program
- traffic safety information
- ideas from similar programs
- community resources and contacts
- suggested activities to generate enthusiastic and sustainable involvement
- forms and models to use as the program was implemented

Way To Go! staff designed the material to be parent focused. Although the kits included resources for teachers and administrators to use should they wish to, Way To Go! wanted to give parent groups the tools to address problems surrounding their own schools. "That is what makes the program completely innovative," said Kowey. "It was not curriculum based. It really belonged to the Parent Advisory Councils."

Way To Go! staff offered training and support to schools groups, which Kowey considered essential to the program's success. This support provided school groups with the following:

- an introduction to the Way To Go! program and its resources
- dates for special events, such as Earth Day and Walk to School Day, which helped schools link their programs to widely-recognized health, fitness, traffic safety and environmental initiatives ([Building Motivation Over Time](#))
- an ongoing link to new ideas for Way To Go! programs, which helped schools maintain their momentum
- a semi-annual idea-sharing newsletter

Schools were free to proceed at their own pace. Some schools began slowly by planning one special active-transportation day such as a walk-or bike-to-school day. Way To Go! staff said this was a positive strategy: it was not overwhelming, schools built on their success and families slowly broke their old driving habits. ([Building Motivation Over Time](#))

Providing feedback was an essential part of the Way To Go! approach. Success depended on the participation of families – and these families needed to know that their actions were making a difference. Schools provided feedback directly to students, staff, teachers, parents and principals through school newsletters, bulletin-board postings and by walking from class to class. For example, at Maple Lane Elementary, the Student Leadership Club went into each classroom to announce that the school had had almost 100 percent participation on International Walk to School Day.

Success

Some of the more impressive results include the following:

- Willows Elementary, in Oak Bay, saw a 10-to-15 percent reduction in vehicles on regular days and a much higher participation rate on special event days.
- Frank Hobbs Elementary in Victoria encouraged students to choose active transportation once a month, with a different class taking responsibility for promoting the event each time. Surveys indicated more than 90% student participation in January 2001 and on International Walk to School Day in October 2000.
- R.J. Tait Elementary, Richmond saw a huge increase of children walking and a marked decrease in cars parked at school as a result of its very organized walking school bus program. On two special event days the school had a 100-percent participation rate.
- At Hawthorne Elementary, which was one of the pilot schools, everyday use of bikes for getting to school doubled under the Way to Go! program. It was not unusual to find sixty to eighty bicycles in the bike racks. When some of the Hawthorne students went to the newly built Neilson Grove Elementary, they continued to bicycle to that school.

Related Resources

The links within the case study are "tools" at Tools of Change: www.toolsofchange.com/en/tools-of-change/

The Way to Go! program has ended and the process manual and resource kit are no longer available. However, many of the ideas developed within the program can be found at: www.saferoutestoschool.ca/school-travel-planning-toolkit.

The Canadian School Travel Planning Facilitator Guide and many other documents can be downloaded there.

Case Study 2

School Travel Plan Birmingham, United Kingdom

www.birmingham.gov.uk/school-travel-plans

The Birmingham School Travel Plan Team works with schools across the city to encourage parents and children to consider healthy and sustainable forms of transport when travelling to and from school. The majority of Birmingham schools have produced travel plans which are written documents setting out practical measures and initiatives for reducing the number of car trips made to school and for improving safety on the journey. The action plan is at their core, setting out what will be achieved, including targets with dates and people assigned to each action. Some examples of the associated activities and events in which schools participate include:

- 'Walk to School' activities
- Providing journey information through the School TravelWise website
- Establishing Park and Stride sites - where parents park away from the school gate and walk the rest of the way
- Cycle and pedestrian training
- Road safety education and resources
- Improving public transport information and facilities
- Setting up Walking Buses - for trained parents to escort groups of children to and from school

These case studies show how School Travel Plans can help reduce congestion and encourage sustainable transport:

1. The Community Partnership Approach

Bellfield Infants School in Northfield found that pupils were not walking to school as a result of the busy roads close by. The school wrote a School Travel Plan to reduce congestion outside the school gate and tap into Safe Routes to School (SRTS) funding to improve the physical environment outside their school.

After a feasibility study, the school succeeded in obtaining SRTS funding for physical alterations to the existing road network to make it safer for pupils to walk and cycle to school. These alterations included installation of school warning signs, road markings, pedestrian crossings, refuges, guard rails, speed cushions, double yellow lines and sections of road lined with red anti-skid tarmac.

In addition, a Park and Stride site was launched. The School Travel Plan Advisor contacted the local Sainsbury store, which was situated towards the back of the school, requesting the use of their car park for parents who lived too far away from the school to walk their children in each day. A number of parents now park and stride their children to school.

As a result of this community approach more children are now walking to school. This allows them to walk with friends, improve their fitness level, reduce congestion outside the school gate and increase parent and child interaction.

2. Ways to Promote Cycling to School

Wyndcliffe Primary School in Small Heath wanted to promote cycling amongst pupils as a way to reduce congestion outside the school gate and improve pupil fitness levels. Their government grant for completing a School Travel Plan helped purchase state of the art cycle lockers and shelters for those children wanting to cycle to school. Older children took part in cycling training provided by Birmingham City Council. Local Street Wardens for Small Heath further helped train the children and offered ways to keep their bikes safe and secure.

Wyndcliffe is also aiming to achieve Birmingham Healthy School Standard, which School Travel Plans links into. Cycling is one part of their target which includes reviving a nature area as an outdoor classroom, getting the children to make healthy food choices and improving their fitness levels. Simon Cotter, teacher at Wyndcliffe Primary and responsible for the Travel Plan, says the whole school is working together to become healthier. Cycling is an important part of this. It is an excellent form of exercise, makes children aware of road safety issues and is also great fun.

Case Study 3

Bear Creek Safe Routes to School Program *Bear Creek School, Boulder, Colorado, United States*

www.toolsofchange.com/en/case-studies/detail/634

links within the case study are “tools” at: www.toolsofchange.com/en/tools-of-change/

The Bear Creek Safe Routes to School Program is a good illustration of how much and how quickly transportation habits can change through elementary school programs. Bear Creek received the 2008 James L. Oberstar Safe Routes to School Award, a national award presented by the National Center for Safe Routes to School in recognition of outstanding achievement by a school or community in establishing a Safe Routes to School (SRTS) program.

Bear Creek pupils could attend the school even if they did not live within the immediate catchment area. These children, however, did not have access to school bus service. In 2011, of the 360 students at the school, approximately two-thirds lived within two miles of the school. In 2007, less than half (41%) of students reported walking or cycling to school. In 2006, the year the Walking School Bus began, only about 25% of children were actively travelling to school.

In 2006, two parents at Bear Creek heard about the Walking School Bus and decided it would be a good idea to implement the program at the school. Working with the SRTS administrator for the Boulder Valley School District, Bear Creek initiated a number of active transportation programs and worked with local officials to improve the cycling and walking infrastructure around the school. As part of the Colorado SRTS program, Bear Creek received funding from the state to implement active transportation initiatives.

General Implementation Parents and the SRTS Administrator collaborated from the start to finish of the grant project. Parents were first informed about the program through material sent home with their children at the end of the school year in 2006. The coordinator said “as parents planned their year, they would determine how their children would get to school, walking or cycling or carpooling, and figure out how to fit it into their daily schedule. It became a habit.” ([Vivid, Credible Communication](#); [Building Motivation Over Time](#))

Principal Kent Cruger acted as the primary role model for the students when the program initially began. He issued himself a challenge to get to school without a car and, each month, tried a different form of transportation (carpools, a unicycle, scooter and a skateboard among them). ([Vivid, Credible Communication](#); [Building Motivation Over Time](#)) Bear Creek’s general guideline was that students in kindergarten through second grade went to school with their parents or the group, while students in grades three to five could walk with the bus, by themselves or with friends.

Walking School Bus Students were keen to be involved and needed little persuasion to get them to walk or cycle to school. Some parents, however, did express concerns: time and safety being among the top ones. Safety concerns were not limited to traffic issues. Mountain lions in the vicinity are most active at dusk when children were walking home from school. The Walking School Bus, along with certain infrastructure improvements, helped alleviate many of those concerns. ([Overcoming Specific Barriers](#))

Parent volunteers coordinated the Walking School Bus with at least one adult at the front and one at the back of the “bus.” This helped alleviate parental concerns about traffic and other safety issues. Parents wore bright yellow shirts or vests, carried yellow balloons and wore bright yellow cap, announcing each stop as they walked the route. ([Vivid Communication](#); [Overcoming Specific Barriers](#); [School Programs that Involve the Family](#))

Cruger notes that Bear Creek *never* told parents that the school or parent volunteers were responsible for the kids. “We told them that those parents are not responsible for your child, but they will be walking that route, which means more parents, more children and greater safety. It was up to the parents to decide if they felt comfortable having their child walk in a large group.” As the program matured, parents became more comfortable. “The route was always the same, it left at the same time and a lot of times, parents could just look out the window, send their child out to greet the group, and see the bus go by.”

For families that lived very far away, Bear Creek implemented the **Ride and Stride** program, which encouraged parents to drive part of the way to school then have their children walk the rest. ([Overcoming Specific Barriers](#)) Some parents would drive to another parent's home and their children would pick up the "bus" from there. This not only helped to get more students participating, but helped build community.

Partnerships The Boulder Police were also involved in setting up bicycle safety courses and addressing parental concerns about speeding in the vicinity of the school. ([Overcoming Specific Barriers](#)) Local businesses were approached to take part. King Soopers grocery store, for example, was located on the Walking School Bus route. The store's management allowed parents to park in the lot and then walk with their children the rest of the way to school. As a result, one of the walking routes was named for the store (the Sooper Shuttle).

Reminders, Visibility and Building Over Time Students brought home paper forms to be filled out each day with the mode(s) of transportation used to get to school and back. In addition to documenting changes in travel behavior, these sheets served as in-home reminders. ([Prompts](#)) The form was then turned in to the school each month. Each classroom had a poster that showed how each student got to school. These methods were an inexpensive way to measure how many students were taking part, took very little time to fill out, and made an enormous difference to the students as they were recognized each day they walked, cycled or carpooled. In addition, students participating in the Tour de French (described below) wore colored armbands demonstrating their involvement. ([Norm Appeals](#))

In large measure, the program's success was dictated by the sheer number of initiatives that maintained high program visibility, kept students' interest throughout the year, and provided additional options to consider. ([Building Motivation Over Time](#); [Norm Appeals](#)) For example:

- Modeled after the Stanley Cup, the Cruger Cup, named for Bear Creek's principal, asked each student to walk, bike or carpool every day of the school year. Each student who participated got to take the cup home for a visit, much like the NHL champions.
- The Tour de French was named for teacher, Jay French, who regularly cycled to school (a 34-mile round trip). The trips of each participating student were counted and awards were given to the class with the most number of cycling trips in a month. Students wore arm bands, modeled after the Tour de France leader jerseys, to show their participation.
- Awards were also given for Rookie Riders (students who had never cycled before), for the Least Deterred (one student scootered to school in 8 inches of snow), Most Inspired, Bear Creek Role Model, and Most Consistent. In some cases, teachers won those awards.
- The "March Madness" event involved students challenging each other to come to school in unique ways (unicycling, skateboarding, walking backwards, leapfrogging to school, even brushing their teeth while walking).
- The Zero Cars in the Parking Lot Day resulted in 99% of parents, teachers and staff not using a car to get to school.

Results

- 70% of students regularly walked, cycled or carpooled to school in 2009, compared to only 25% before the program began.
- In the first full year of the program (2006-2007), the City of Boulder conducted a study and found that there was a 36% reduction in cars and traffic congestion around the school.
- In 2009, 100 of 360 students participated in the Cruger Cup.
- Bear Creek won an award for most student participation in the Bolder Boulder campaign (a 10K run/walk event).
- Bear Creek was able to make the case before their district school board and municipality to improve nearby infrastructure. Changes were made to crosswalks near the school, signage was improved, improvements were made to a bridge that was part of the walking path to school, and new sidewalks were added.
- Cruger said that the enthusiasm of the students rubbed off on the teachers and staff. "Seeing five- and six-year olds walking to school, up hills, and having no problems, made them realize that if the kids could do it, so can we. The kids made it fun for us." He also notes that, in the U.S., teachers are "notorious for taking care of everybody, sometimes at the expense of their own health," so as more teachers and staff began to walk and cycle, their own health improved.
- Cruger said that making walking and cycling into a habit was key to the success of their program. "Once they get into a habit, they don't need rewards to keep it up because they find it's a better way to get to school."

Additional Case Studies

National Center for Safe Routes To School – www.saferoutesinfo.org/

- www.saferoutesinfo.org/program-tools/find-state-contacts/arizona
 - [Coconino County, Arizona: "Walk, Bike and Get Fit" in Flagstaff, Arizona](#)
 - [Flagstaff, Arizona: Walking School Bus “takes back” a local park](#)
 - [Gilbert, Arizona: Partners across school districts](#)
 - [Phoenix, Arizona: Maricopa County offers SRTS option for students](#)
 - [Prescott, Arizona: Transportation mural encourages new thinking](#)
- http://guide.saferoutesinfo.org/case_studies/index.cfm

Program aimed at transportation choices of high school aged youth:

www.fcm.ca/Documents/case-studies/GMF/Transport-Canada/OffRamp_EN.pdf

Safe Routes to School National Partnership – <http://saferoutespartnership.org/>

Safe Routes to School and Traffic Pollution: Get Children Moving and Reduce Exposure to Unhealthy Air

<http://saferoutespartnership.org/resources/report/srts-and-traffic-pollution>

Developing Policy

Safe Routes to School is an international movement that encourages students to walk, ride bicycles, and use other forms of active transportation. Active transportation improves children’s health and well-being, reduces traffic congestion and motor vehicle emissions, and builds neighborhoods. Making active transportation safe and desirable requires action from many community stakeholders, including schools, students, families, municipalities, neighborhood businesses, planners, transportation engineers, and community groups.

The Safe Routes to School District Policy Workbook is an interactive tool designed to help school board members, administrators, families, and other community members create and implement policies that support active transportation and Safe Routes to School programs. The workbook walks (pun intended!) stakeholders through a series of policy options to help each community build its own customized Safe Routes to School policy for download and use.

The Workbook is a collaboration between the Safe Routes to School National Partnership and ChangeLab Solutions. It can be found at their websites:

www.saferoutespartnership.org/resources/model-policy/srts-district-policy-workbook

www.changelabsolutions.org/safe-routes/welcome

Research and Reports

National Center for Safe Routes to School – national reports describing patterns and trends related to the implementation of Safe Routes to School using federal funds.

<http://saferoutesinfo.org/program-tools/national-progress/national-reports>

“The Costs and Benefits of School Travel Planning Projects in Ontario, Canada” (2014) and several other reports pertaining to school travel planning in Ontario.

www.metrolinx.com/en/projectsandprograms/schooltravel/school_travel_resources.aspx

“Review of International School Travel Planning Best Practices” (2010)

www.metrolinx.com/en/projectsandprograms/schooltravel/Review_of_Intl_STP_Best_Practices_Update_2010.pdf

“Saving Money and Time with Active School Travel” (2010)

www.saferoutestoschool.ca/sites/default/files/Saving_Money_and_Time_with_AT-Final-Sept_2010_0.pdf

“School Travel Planning in Canada: A Holistic Examination of Program Impact on Active School Travel” (2016)

www.saferoutestoschool.ca/sites/default/files/STP_Impacts-G_Mammen-PhD_Thesis-2016.pdf

Results from Canadian schools participating in the 27 month national project entitled “Children’s Mobility, Health and Happiness: A Canadian School Travel Planning Model” (2012).

www.saferoutestoschool.ca/downloads/Executive_Summary-CLASP_Results-May_2012.pdf

World Transport Policy & Practice – Volume 14, Number 1 – “The Journey To School” (2008)

www.eco-logica.co.uk/pdf/wtpp14.1.pdf

Environmental Protection Agency “School Siting Guidelines” (2011)

(Sections 1.4.3, 1.4.4, 4.3.3, 4.3.4, 8.2, 9.5)

https://web.archive.org/web/20151018093631/https://www2.epa.gov/sites/production/files/2015-06/documents/school_siting_guidelines-2.pdf

“Why Johnny Can’t Walk to School” (2002)

<http://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=0e8d3582-7b0e-93c1-9186-2165af3f9835&forceDialog=0>

“Helping Johnny Walk to School – Policy Recommendations for Removing Barriers to Community-Centered Schools” (2010)

<http://forum.savingplaces.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=d544e7ca-9ae7-dfc8-8f69-cfc3de62223e&forceDialog=0>